

The Bees of Nebraska.—III.

By MYRON H. SWENK.

Family MACROPIDAE.

Genus **MACROPIS** Panzer.

1. **Macropis patellata** Patton.

Meadow, Nebraska, July 14, 1906, three males collected at a small white *Asclepias* (P. R. Jones).

2. **Macropis clypeata** n. sp.

♂.—Length 7 mm.; apparently very close to *M. morsei* Rob., but differing from the description of that species as follows: Pubescence of mesonotum pale and black intermixed, the dark hairs predominating only on the disk; only the clypeus yellow, the spots on the sides of the face and on mandibles lacking; wings smoky, the nervures and stigma black; tarsi wholly black; first two abdominal segments scarcely depressed apically and not fasciate.

Type—Warbonnet Canon, Sioux County, Nebraska, July 13, 1901, on *Pentstemon* (M. Cary). ♂.

Differs at once from *ciliata*, *patellata* and *steironematis* in the face marks and size.

Family DUFOUREIDAE.

Genus **HALICTOIDES** Panzer.

1. **Halictoides marginatus** Cresson.

Entire State (Lincoln, West Point, Neligh, Long Pine, Gordon, Bridgeport, Crawford, Glen and Warbonnet Canon), flying in great abundance at the flowers of the various species of *Helianthus*, and also on *Grindelia squarrosa*, *Solidago rigida*, *Convolvulus* sp. and *Carduus altissimus*, on the three last named flowers but rarely. In eastern Nebraska the season of flight is from August 7 to September 18, in Sioux County somewhat earlier, from June 26 to August 29.

2. **Halictoides maurus** Cresson.

Sioux County, Nebraska, June 13-28, at flowers of *Campanula petiolata*.

Family NOMIIDAE.

Genus **NOMIA** Latreille.

1. **Nomia foxii** Dalla Torre.

Lincoln, West Point and Dundy County, Nebraska, May 31 to July 12 at flowers of *Petalostemon violaceus*.

2. **Nomia nortoni** Cresson.

Lincoln, Nebraska City, Union and Harvard, Nebraska, June 9 to September 14, at flowers of *Solidago rigida*, *Grindelia squarrosa*, *Cassia chamaecrista* and *Petalostemon violaceus*.

Genus **EUNOMIA** Cresson.

1. **Eunomia heteropoda** Say.

West Point and Ord, Nebraska, August.

2. **Eunomia apacha** Cresson.

Sioux County, Nebraska, a single female specimen taken.

Genus **EPINOMIA** Ashmead.

1. **Epinomia triangulifera** Vachal.

Lincoln, Nebraska City and Cedar Bluffs, Nebraska, August 4 to September 18 at flowers of *Helianthus annuus*, *Grindelia squarrosa*, *Polygonum hydropiper* and, less commonly, on *Solidago rigida* and *Vernonia* sp. also. This species has formed a large colony on the salt flats west of Lincoln.

Family **BOMBIDAE**.

Genus **BOMBIAS** Robertson.

1. **Bombias separatus** (Cresson).

This species is abundant over the entire State. Specimens before me are from Lincoln, Omaha, Beatrice, South Bend, Weeping Water, Nebraska City, West Point, Neligh, Niobrara, Springview, Gordon and Sioux County. The females commence to fly in late April, principally upon the flowers of *Prunus*, *Salix*, *Ribes*, *Rubus*, *Malus*, *Astragalus* and *Lonicera*; the workers appear in numbers during the third week in June, visiting during the summer and fall the flowers of *Petalostemon*, *Psoralea*, *Verbena*, *Symphoricarpos*, *Monardiea*, *Cassia* and *Solidago*; the males are abundant during September and October on *Carduus* and *Helianthus*.

2. **Bombias scutellaris** (Cresson).

Of our three common eastern Nebraska *Bombias* this species is the least plentiful. It is present over the entire State, but is more common eastwardly, having been captured at Lincoln, Omaha, Nebraska City, West Point, Carns and in Sioux County. It flies from early June to early October, chiefly on *Petalostemon*, *Carduus*, *Helianthus*, *Solidago* and *Grindelia*.

3. **Bombias auricomus** Robertson. (= *pennsylvanicus* Cresson, ♂, ♀, ♂, in part.)

Probably the entire State, but rare westwardly, and not yet taken in Sioux County. Many specimens from Lincoln, Omaha, South Bend, West Point, etc., and a single worker from Dundy County in June on *Carduus* (M. H. Swenk). Next to *separatus* this is our most common *Bombias*. The females begin to fly in early May and from then to early October, visiting the flowers of *Ribes*, *Astragalus*, *Fragara*, *Rubus*, *Antirrhinum* and *Carduus*.

4. **Bombias nevadensis** (Cresson).

This is essentially a species of the Transition zone, but it straggles south along the western edge of the State to Dundy County, and east along the northern edge to West Point. It abounds in Sioux County, flying from May to September, visiting commonly the flowers of *Astragalus*, *Malvastrum*, *Cleome*, *Monarda*, etc. Cresson's *Bombus improbus* is undoubtedly the male of *nevadensis*.

5. **Bombias morrisoni** (Cresson).

A strictly Transition species, only rarely descending even to the more elevated portions of this State. We have two worker specimens, one taken in Warbonnet Canon, Sioux County, July 21, the other at Gering, Nebraska, in August.

6. **Bombias rufocinctus** (Cresson).

Sioux County (Glen, Harrison, Pine Ridge), July and August, 3 females, 11 workers and 1 male. Also a single male from West Point, Nebraska.

7. **Bombias edwardsii** (Cresson).

A worker bumblebee captured in Warbonnet Canon, Sioux County, July 23, 1901 on *Verbena* (M. A. Carriker), is apparently a variety referable to this species, though not typical of it.

Genus **BOMBUS** Latreille.

1. **Bombus proximus coloradensis** Titus.

Warbonnet Canon, Sioux County, July 1, 1901 (L. Bruner), one female specimen.

2. **Bombus pennsylvanicus** (De Geer). (= *fervida* Fabricius.)

Present over the entire State, but common only in the higher parts, especially in Sioux County, where it is abundant from the middle of May to the middle of September. Eastward, it has been captured at Lincoln, Omaha, Weeping Water, West Point, Neligh, Springview and Gordon. It has been taken principally on *Astragalus*, *Rubus*, *Petalostemon*, *Monarda*, *Mentha*, *Carduus*, *Solidago* and *Helianthus*.

3. **Bombus americanorum** Fabricius.

Distributed as *Bombias auricomus*, which it so much resembles but everywhere more common, probably our commonest *Bombus*. Lincoln, Omaha, South Bend, Cedar Bluffs, Weeping Water, Nebraska City, West Point, Neligh, Broken Bow and Brown, Rock and Hitchcock Counties. Not yet captured in Sioux County. Season as that of *Bombias auricomus*. Our plant records for this species include *Astragalus*, *Rubus*, *Malus*, *Petalostemon*, *Verbena*, *Carduus*, *Cassia*, *Psoralea*, *Monarda*, *Solanum*, *Vernonia*, *Solidago*, *Carduus* and *Helianthus*.

4. **Bombus virginicus** (Olivier).

Eastern Nebraska, common. Specimens are from Lincoln Omaha, South Bend, Cedar Bluffs, Weeping Water, Meadow, Nebraska City, Falls City and Nemaha City. This is the first *Bombus* to appear in the spring, flying about April 20 on *Prunus* and *Ribes*. Later it is found commonly on *Rubus*, *Cassia* and *Petalostemon*.

5. **Bombus ridingsii** Cresson.

South Bend and Omaha, May 17-20 on *Rubus occidentalis*, several female specimens. We have never taken workers or males in the State.

6. **Bombus consimilis** Cresson.

Entire State, specimens from Lincoln, Omaha, South Bend, Weeping Water, Meadow, Cedar Bluffs, West Point, and Sioux County. Found principally on *Rubus*, *Lonicera* and *Petalostemon*. All of our old Nebraska records of *B. vagans* refer to this species.

7. **Bombus huntii** Greene (= *ternarius* of authors, in part.)

This handsome species is confined to the Pine Ridge country in Sioux County, where it flies abundantly from late May to September, visiting *Astragalus*, *Symphoricarpos*, *Campanula*, *Borago*, *Melilotus*, *Monarda*, *Cleome*, *Carduus* and *Helianthus*.

8. **Bombus juxtus** Cresson.

Distributed as *B. huntii*, but much less common, having the same season and visiting the same plants.

Genus **PSITHYRUS** Lepelletier.1. **Psithyrus variabilis** (Cresson).

Our commonest *Psithyrus*. Lincoln, Ashland, Seward and West Point, May to October, found on *Rubus*, *Verbena*, *Liatris*, *Bidens*, *Solidago* and *Carduus*.

2. **Psithyrus laboriosus** (Fabricius).

Two specimens, a female from Lincoln taken in August, 1893, and a male from West Point taken September 19, 1887. This species is much closer to *P. latitarsus* Morrill than is *P. insularis*, with which he compares it.

3. **Psithyrus insularis** (F. Smith).

Found only in Sioux County, from which we have a female and two male specimens.

Family MELECTIDAE.

Genus **NEOLARRA** Ashmead.1. **Neolarra verbesinae** Cockerell.

One ♀ specimen, Warbonnet Canon, Sioux County, Nebraska, July 23, 1901, on *Helianthus* (M. Cary).

Genus **NEOPASITES** Ashmead.1. **Neopasites illinoiensis** Robertson.

Lincoln, West Point, Cedar Bluffs and Omaha, Nebraska, June 20 to September 11, on *Solidago rigida* and *Grindelia squarrosa* in the fall, and on *Ratibida columnaris*, *Symphoricarpos occidentalis* and *Asclepias* sp. in the summer. This species has been found in the nests of *Calliopsis andreniformis* at both Omaha and West Point.

2. **Neopasites heliopsis** Robertson.

Lincoln, West Point, Springview and Warbonnet Canon, Sioux County, Nebraska, June 21 to September 11, on *Solidago rigida*, *Grindelia squarrosa* and *Aster* in the fall, and on *Senecio* in the summer.

3. **Neopasites robertsoni** Crawford.

I took several specimens of this species August 27, 1902, on *Solidago rigida* along with *N. heliopsis*, which was much more abundant. Mr. Crawford records it from West Point, August 30, 1903 on the same flower.

Genus **MELECTA** Latreille.1. **Melecta interrupta** Cresson.

Warbonnet Canon, Glen, Long Pine and West Point, Nebraska, June 30 to August 16 at flowers of *Cleome serrulata*, *Petalostemon violaceus* and *Monarda* sp.

2. **Melecta miranda** Fox.

The preceding species is characteristic of the Transition zone and is replaced in the Upper Sonoran by this species. Lincoln, Weeping Water, Glen and Gering, Nebraska, season and flowers the same as for *interrupta*; also found occasionally upon flowers of *Helianthus annuus*.

Genus **BOMBOMELECTA** Patton.1. **Bombomelecta pacifica** Cresson.

Warbonnet Canon, Monroe Canon and Halsey, Nebraska, May 28 to June 6, flying at flowers of various species of *Astragalus*.

VIERECKELLA new genus.

Labial palpi 4-jointed, as long as glossa, two basal joints long and flattened, two distal joints short and sub-cylindrical, proportionate length as 10.5: 6: 1.7: 1, Maxillary palpi 5-jointed, the first four joints elongate and cylindrical, the basal joint thickest, joint 2 slightly more slender and much longer, joint 3 subequal to but more slender than 2, 4 about two-thirds as long as 3, joint 5 extremely minute, visible only upon close microscopic scrutiny. Glossa long, one and one-half times as long as the mentum, lanceolate. Mandibles with a deep

external tooth, inserted before middle of eye. Marginal cell at apex rounded, widely separated from costa, nearly as long as the combined three submarginals but distinctly shorter than the first discoidal cell. Submarginals three, subequal in length along the cubitus, first one trapezoidal, second slightly narrowed above, third narrowed about one-third. First transverse cubital nervure straight, second slightly curved, third bulging strongly out toward apex of wing. First and second recurrent nervures joining second and third submarginal cells respectively near their apices. Median cell much larger and nearly twice as long as the submedian. Discoidal nervure much longer than the sub-discoidal nervure. Stigma medium-sized, well developed. Scutellum bilobed. Legs stout, simple. Claws with a short inconspicuous internal tooth. Tibial spurs short and stout, only one on middle tibiae, dark testaceous and microscopically pectinate. Abdomen short, conical, segment 6 of ♀ exerted, elongate acuminate, with a distinct pygidial area.

Viereckella obscura n. sp.*

♀.—Length 10 mm.; shining black, nearly bare. Head coarsely punctured, very shallowly on clypeus and cheeks, deeply so on front, the sides of vertex finely punctured. Supraclypeal area elevated, continuous with a median carina between bases of antennæ. Antennæ black, scape finely punctured, the flagellum testaceous beneath, joint three decidedly shorter than four. Labrum shining, punctured like the front. Mesonotum shining, coarsely and closely punctured, no well-defined discal space, scutellum and pleura similarly but more coarsely punctured, postscutellum opaque, irregularly reticulate. Metathorax with a smooth, shining, almost impunctate basal triangle, elsewhere punctured like mesonotum. Tegulae large, shining black, finely punctured. Wings heavily darkened, nervures and stigma black. Basal abdominal segment subimpunctate, except laterally, following segments feebly and mostly indistinctly punctured, the margins of the segments not depressed. Pubescence short, sparse, pale grayish white, except that on tibiae and tarsi, which is largely black, and that on the inner surface of the tarsi which is orange, longest on pleura, scutellum and postscutellum. The abdomen has very loose thin lateral fasciae on apices of segments 1-5, and segments 4-6, bear some black bristles ventrally.

♂.—Unknown.

*A second species of the new genus occurs in Virginia.

Type—Meadow, Nebraska, July 14, 1905, (P. R. Jones).
♀.

In Ashmead's tables this bee runs to *Aglæ* Lep. or *Lciopodus* Smith. To the former it is but distantly related, but to the latter it is fairly close, differing radically, however, in the comparative lengths of the palpal joints. From the type species of *Lciopodus* this species differs in the lack of depression on mesonotum, dark wings, lack of abdominal maculæ, etc. I take pleasure in dedicating this remarkable new genus to Mr. H. L. Viereck, in recognition of his valuable contributions to the study of North American bees.

Viereckella ceanothina Ckll., n. sp.

♀.—Similar to the typical species, but smaller (length less than 8 mm.); wings only moderately dark, darkest apically, second submarginal cell small, subtriangular, being much narrowed above, very much shorter above and below than the first or third; flagellum beneath dark coffee brown, except its first joint, which is red; hair of tibiæ white. Runs nearest to *Lciopodus* in Ashmead's table. I examined the type of *Lciopodus* in the British Museum (see Trans. Am. Ent. Soc. XXXI, 316) and it is a decidedly different insect. The hind coxæ are large and long, while in our insect they are normal, though rather large; the b. n. falls a considerable distance short of t. m.; in our species they meet. The shape of the second s. m. is entirely different.

Habitat.—Falls Church, Va., June 14, at flowers of *Ceanothus*. (Nathan Banks)—T. D. A. COCKERELL.

Lycaena emigdionis Brennell.—Mr. Fordyce Grinnell described, in ENTOMOLOGICAL NEWS, April, 1905, a male and female of a *Lycaena*, which he called *emigdionis*. His specimens were taken in San Emigdio Canon, Kern County, California, in June. Mr. W. G. Wright, in Butterflies of the West Coast, page 226, redescribed the species, giving it the name *melimona* "from both of its supposed parents" (*melissa* and *acmon*.) All his specimens were females and were taken in one locality in the San Bernardino Mountains in June. He found *acmon* prevailing there in May, *melimona* in June, and *melissa* in July. The larval food-plant of *emigdionis* is *Hosackia purshiana*. Specimens sent by Mr. Wright to W. H. Edwards were said to be "only a variety of *acmon*." He has never taken the male. A later examination of Mr. Grinnell's specimens proves them to be all females, and, as Edwards said, *emigdionis* is probably only a variety of *acmon* and the synonymy will be *Lycaena acmon* Boisid. Var. + *emigdionis* Grinnell, *melimona* Wright.
—CARL R. COOLIDGE.